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Jakob Voets

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EXAMINER

NGUYEN, MAI T

ART UNIT

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3671

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/519,646	Applicant(s) VOETS, JAKOB	
	Examiner MAI T. NGUYEN	Art Unit 3671	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) 36 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 and 37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 December 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the horizontal axle in claim 4, ln. 5 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

3. Claim 22 is objected to because of the following informalities: "choppers" in line 3 should be --chopper--since only one chopper was previously set forth in claim 1.

Appropriate correction is required.

4. Claim 17 is objected to because of the following informalities: "the area" in line 2 should be --an area-- since it was not previously set forth. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claim 22 is rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for driving the mowing assemblies by v-belts, does not reasonably provide enablement for driving the chopper by a v-belt. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. The chopper being driven by a v-belt is required by the claim in line 3, however no support for this claim is found within the disclosure. **NOTE:** Claim 22 will be examined as only the mowing assemblies being driven by a v-belt.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 5, 7, 10-13, 18-21, 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 5 depends from claim 4 and appears to further define the two mowing assemblies set forth in claim 4 by arranging them in a V-formation on the front of a tractor. However, claim 5 recites "a plurality of mowing assemblies" rather than "the two mowing assemblies." It is unclear whether Applicant is claiming a second set of mowing assemblies in addition to the two mowing assemblies, or if Applicant means to refer back to the two mowing assemblies recited in claim 4. Also, "a tractor" in claim 5, line 3 should be --the tractor-- unless Applicant is referring to a second tractor. As a reminder when amending the claims, the claimed subject matter should be apparent in the drawings. **NOTE:** Claim 5 will be examined as having the two mowing assemblies arranged in a V-formation on the front of the tractor of claim 4.

Claims 10-13 recite "the discharge," however, what is considered "the discharge"? Is it the discharge device or the discharge of opening from claim 8? Or does "the discharge" refer to clippings being discharged? **NOTE:** "The discharge" of claims 10-13 will be examined as referring to the discharge device.

Claim 18 recites the limitation "the housing of the chopper" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim since claim 18 does not

depend from a claim that sets forth the housing. **NOTE:** "The housing" of claim 18 will be examined as given the broadest, reasonable interpretation.

Claim 19 recites the limitation "the tractor" in line 2. There is insufficient antecedent basis for this limitation in the claim since claim 19 does not depend from a claim that sets forth the tractor. **NOTE:** Claim 19 will be examined as though depending from claim 4 which sets forth a tractor.

Claim 24 recites "the mowing aggregates have several blades", however, the mowing aggregates also have cutters as recited in claim 1, from which claim 24 depends. Are the blades presented in addition to the cutters or are the blades further defining the cutters? **NOTE:** The blades in claim 24 will be examined as further defining the cutters.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. Claims 1, 2, 3, 8 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Eggenmueller (US 5,070,683).

Regarding claim 1, Eggenmueller discloses a device for picking up and comminuting clippings in a mowing unit in figs. 7-9, comprising:

a mowing assembly 61 having cutter 62 and a rotating axle (unnumbered), see fig. 7;

a chopper 64 having a rotating axle 65 disposed at angle relative to axle 16; and
a discharge device 70 through which clippings are fed, see col. 6, ll. 39-41.

Regarding claim 2, Eggenmueller discloses the device of claim 1 wherein the angle between the axles of the mowing assembly and the chopper appears to be within the range of 60 to 90 degrees, see fig. 7.

Regarding claim 3, Eggenmueller discloses the device of claim 1 wherein the chopper 64 is arranged above the mowing assembly 61, see fig. 7.

Regarding claim 8, Eggenmueller discloses the device of claim comprising a plurality of chopping elements 66 which rotate around axle 65 of chopper 64, the axle extending inside of housing 63 that is open at the bottom and a discharge opening at the top connected to the discharge device 70, see fig. 7.

Regarding claim 23, Eggenmueller discloses the device of claim 1 wherein the deflecting element 32, 73 causes different degrees of comminution by deflecting a portion of clippings back through the chopper for further comminution, see col. 5, ll. 38-54 and col. 6, ll. 36-65.

11. Claims 4, 9 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggenmueller as applied to claim 1 above, and further in view of Scherer et al. (US 3,638,406).

Regarding claim 4, Eggenmueller discloses the device of claim 1 having one mowing assembly but does not disclose two mowing assemblies connected to a tractor.

Scherer teaches a similar device having mowing units 249 and a chopper 1 pivotally connected to a tractor 4 by a horizontal axis (unnumbered) which connects the

chopper to horizontal attachment frame 234 via vertical shaft 235, see fig. 48 and col. 21, ll. 27-31.

It would have been obvious to one of ordinary skill in the art to provide the mower of Eggenmueller as a tractor-mounted mower as taught by Scherer because it is well known in the art to use heavy-duty tractor-mounted mowers to reliably mow vast agricultural fields of varying terrain.

Regarding claim 9, Eggenmueller discloses the device of claim 8 having a discharge opening but does not disclose the opening being funnel-shaped.

Scherer teaches a similar device of claim 1 having a funnel-shaped discharge opening 36 positioned over chopping elements 31 and connected to a discharge chute (unnumbered), see fig. 4.

It would have been obvious to one of ordinary skill in the art to replace the discharge opening of Eggenmueller with a funnel-shaped discharge opening as taught by Scherer because it is well known that the use of a nozzle-like channel facilitates and accelerates the discharge of particles.

Regarding claims 19-21, the combination of Eggenmueller and Scherer discloses the device of claim 4 having a tractor, wherein the tractor drives the mowing units and chopper through a power takeoff shaft 8, see Scherer, fig. 2 and col. 11, ll. 72-75.

12. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggenmueller in view of Scherer as applied to claim 4 above, and further in view of Allely (US 4,192,123).

Regarding claim 5, the combination of Eggenmueller and Scherer discloses the device of claim 4 but does not disclose the mowing assemblies being arranged in a V-formation on the front of the tractor.

Allely teaches a similar tractor having a plurality of mowing assemblies 296, 298, 300, 302, 304, 306, 308, 310 312, 318, 314, 316 and 320 arranged in a V-formation, see figs. 8-11.

It would have been obvious to one of ordinary skill in the art to replace the mowing assemblies of the combination Eggenmueller and Scherer with a plurality of mowing assemblies arranged in a V-formation as taught by Allely in order to better direct the path of cut grass and to form a single windrow, see Allely, col. 6, ln. 56- col. 7, ln. 7.

While the mounting of the assemblies to the front of the tractor is not disclosed, examiner takes official notice that it is old and well known to rearrange mowing assemblies to be mounted to the front of a vehicle.

Therefore, it would have been obvious to one of ordinary skill in the art to rearrange the mowing assemblies of the combination of Eggenmueller, Scherer and Allely to be mounted to the front of the tractor as an obvious matter of design choice.

Regarding claim 6, the combination of Eggenmueller, Scherer and Allely above in claim 5 discloses the mowing assemblies arranged in a V-formation, further wherein the assemblies are rotary blade mowers which pivot around axles perpendicular to the ground surface to be mowed.

Regarding claim 7, the combination of Eggenmueller, Scherer and Allely discloses the mowing assemblies comprise drums rotating inwardly in the direction of the longitudinal axis of the tractor, see the arrows in Scherer, fig. 48 and in Allely, figs. 8-11, and the chopper 64 extends over the mowing assemblies, see Eggenmueller, fig. 7.

13. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggenmueller alone.

Regarding claims 10-13, Eggenmueller discloses the device of claim 8 having a discharge device in the form of a chute but does not disclose the details of claims 10-13.

However, examiner takes official notice that it is old and well known to use adjustable chutes to effect the direction and height of discharged material.

Therefore, it would have been obvious to one of ordinary skill in the art to replace the chute of Eggenmueller with an adjustable chute in order to control discharge direction and height for collecting discharge into a pile or into a container as desired.

14. Claims 14-18 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggenmueller in view of Schwalm (US 3,191,367).

Regarding claim 14, Eggenmueller discloses the device of claim 1 having a housing 63 but does not disclose the housing being open in the forward direction.

Schwalm teaches a similar device having a chopper 31 and a mowing assembly 15 wherein a hood 16 extends over the mowing assembly and has side walls 19 and an

opening 20 at the forward end to allow standing crop material to enter, see fig. 1 and col. 2, ll. 3-8.

It would have been obvious to one of ordinary skill in the art to provide the housing of Eggenmueller with a opening in the forward end as taught by Schwalm in order to facilitate the feeding of standing crop material into the device, see Schwalm, col. 2, ll. 6-8.

Regarding claim 15, the combination of Eggenmueller and Schwalm discloses the device of claim 14 wherein the cover, also considered the housing, is considered to be positioned from the cutters at a distance wherein clippings are only slightly crushed under the cover, see Schwalm, fig. 1.

Regarding claim 16, the combination of Eggenmueller and Schwalm discloses the device of claim 15, the housing being located a distance above cutters but does not disclose a range of heights.

However, the distance between the housing and the cutters is considered a design choice and it would be well within the scope of one of ordinary skill to design the housing to be a distance from the cutters in order to best accommodate the varying heights wild or domestic grass.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to provide the housing of the combination of Eggenmueller and Schwalm with a distance of 10cm to 55 cm above the cutters in order to better feed grass of varying height into the device.

Regarding claim 17, the combination of Eggenmueller and Schwalm discloses the device of claim 14, the housing 63 having a cutout in an area of the chopper 64 and connected to the discharge device 70, see Eggenmueller fig. 7.

Regarding claim 18, the combination of Eggenmueller and Schwalm discloses the device of claim 14, wherein the cover and the housing are a single piece, see Eggenmueller, fig. 7.

Regarding claim 22, Eggenmueller discloses the device of claim 1 but does not disclose the mowing assembly being driven by a v-belt.

Schwalm teaches a similar device wherein the cutter 26 of mowing assembly 15 is driven by a belt 56 which is driven by a power takeoff shaft of a tractor, see fig. 1 and col. 2, ll. 37-49.

It would have been obvious to one of ordinary skill in the art at the time of the invention to provide the mowing assembly of Eggenmueller driven by a belt as taught by Schwalm in order to efficiently power the assembly when attached to a tractor and to reduce bulk and weight on the assembly caused by heavy motors.

While the belt of Schwalm is not a v-belt, examiner takes official notice that is old and well known to use v-belts to better engage mating pulley surfaces.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have replaced the belt in the combination of Eggenmueller and Schwalm with a v-belt to provide better engagement with a mating pulley surface for greater reliability.

15. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eggenmueller in view of Rolfe (US 5,561,972).

Regarding claim 24, Eggenmueller discloses the device of claim 1 but does not disclose detachable blades affixed to a carrier element.

Rolfe teaches a similar mower for cutting grass having a star-shaped carrier element 1 rotating around axle 24 and having blades 6 detachably affixed to legs 3 of the carrier element, see fig. 2 and col. 4, ln. 64-col. 5, ln. 5.

It would have been obvious to one of ordinary skill in the art to replace the mowing assembly of Eggenmueller with a carrier element and detachable blades as taught by Rolfe in order to provide a cost effective means to replace only worn or damaged blades as necessary, rather than the entire cutter.

16. Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggenmueller in view of Bailey (US 4,434,605).

Regarding claims 25-27, Eggenmueller discloses the device of claim 1 but does not disclose drums as rotational elements.

Bailey teaches a mower drum 5 of a similar device wherein the drum has a rotating screw 6 and wings 8, see fig. 2 and col. 2, ll. 32-35.

It would have been obvious to one of ordinary skill in the art to replace the cutter of Eggenmueller with a mowing drum as taught by Bailey in order to durability to the device for cutting tall grass and brush in fields.

17. Claims 28-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggenmueller in view of Myers (US 3,736,736).

Regarding claims 28-30, Eggenmueller discloses the device of claim 1 but does not disclose a conveyor to transport clippings to a collection container.

Myers teaches a mowing device wherein a conveyor comprising a chute 44 made of perforated metal to allow air to escape, see col. 3, ll. 53-63 and a conveying screw 68 transports clippings to a collecting container 94, see col. 5, ll. 10-15 and figs. 2 and 3.

It would have been obvious to one of ordinary skill in the art to provide the device of Eggenmueller with a conveyor and collecting container as taught by Myers in order to efficiently transport clippings to a larger capacity container more conveniently located towards the rear of the device.

Regarding claims 31 and 32, Eggenmueller discloses the device of claim 1 having a collecting container 72, see fig. 7, but does not disclose the container having a wall that can flip open.

Myers teaches a collecting container 96 having a door 106 which can flip out to expose an endless floor in order to allow the container to be emptied, see col. 5, ll. 28-32 and col. 7, ll. 11-27.

It would have been obvious to one of ordinary skill in the art to provide the collecting container of Eggenmueller with a side that can flip open in order to easily remove clippings once the container is filled.

18. Claims 33-35 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eggenmueller in view of Wessel (US 4,601,162).

Regarding claims 33-35 and 37, Eggenmueller discloses the device of claim 1 having at least one mowing unit but does not disclose a plurality of mowing units having a height guide located underneath the units, wherein the heights can be varied independently of each other.

Wessel teaches a plurality of mowing drums 10', 11', 13' wherein wheels 32', also considered casters or rollers, are located in the middle, underneath and encircled within the drums, see figs. 1B and 4 and col. 6, ll. 53-67.

It would have been obvious to one of ordinary skill in the art at the time of the invention to replace the mowing unit of Eggenmueller with a plurality of mowing drums having height guiding wheels as taught by Wessel in order to durably mow agricultural fields while maintaining a constant cutting height over uneven terrain.

Conclusion

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MAI T. NGUYEN whose telephone number is (571)272-7662. The examiner can normally be reached on Monday-Friday 8:00a-5:00p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will can be reached on (571) 272-6998. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3671

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas B Will/
Supervisory Patent Examiner
Art Unit 3671

Mtn
8/29/08